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ABSTRACT

Described is the rationale and methodology of the Flying Start program, a conditioning program designed to teach good learning skills to 5- to 7-year-old children and the older retarded. It is explained that in playing games with the program's materials the children learn the value of close attention, of taking time to reflect and to draw on their earlier learning, and to get the confidence they will succeed if they try. Some of the games are described. (Author/SBH)

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The Flying Start Learning-to-learn Program: Chairperson's Introduction.

D. H. Stott

Abstract

This contribution serves an an introduction to the following evaluations of the Flying Start Learning-to-learn Program by Marie O'Neill, Len Green, Jean Francis and George Thomson. In it Dr Stott, the originator of the Program, describes its rationale. This is to draw on the motivation which children invest in their play in order to teach them how to do their best in academic tasks. In playing the games children learn the value of close attention, of taking time to reflect and to draw on their earlier learning, and – above all – to get the confidence that they will succeed if they try. Some of the games are described.

The Flying Start Learning-to-learn Program.

Because the next four contributions report experiments testing the effectiveness of the Flying Start program in teaching good learning skills I am going to spend a few minutes describing its rationale and methodology.

The Flying Start materials perform their training function through what the children perceive as games. They were designed and field-tested with children aged from five to seven and the older retarded. However, the items are graduated and have alternative methods of use, so that some of them can be used for the remediation of faulty learning habits irrespective of age. They are used in different ways according to the type of faulty learning style identified, but the student works through the whole series of items whatever his particular faults or deficits.

Learning and problem-solving contain three components: the focusing of attention, the processing of the information received through the mind (which also entails allowing time for this to happen) and being willing to tackle a problem. If any of these components is missing, no learning occurs. The tasks of the Flying Start require all three, even though, in the earliest of the series, at a very elemental level. Thus, in working through the program, the student receives training in whichever component he has weaknesses. The teacher will

vary the emphasis for a particular student, according to the type of faulty learning style identified by the Guide to the Child's Learning Skills, or by his observing of the student's learning habits.

The Flying Start is essentially a program of conditioning. The items are designed in a way that, according to the level at which the student is working, use of the above conditions for learning brings success in the task. Lapses into behavior which are unproductive for learning remain unreinforced. The goals of the activities are designed to give the learner feelings of effectiveness and competence. Thus, the rewards are built into activity itself and there is normally no need to supply external reinforcements. The student's learning skills are shaped as he observes the results of his own responses. These he can see for himself immediately, or they are signalled to him by his game-partner. This self-correcting feature of the materials means that the student is spared the possible anxiety of having to answer to an adult. Moreover he cannot manipulate the adult to provide the answers for him.

The Flying Start differs from other early-education materials in that, when pieces have to be fitted to form a picture, they consist of uniform shapes with straight lines at their joining edges, and not of irregular shapes as in traditional jigsaws. The purpose of this is to force the student to exercise visual perception in deciding whether a

piece is correctly placed. That is to say, he has to notice whether the piece added is consistent with the rest of the picture. So long as it is possible to use the shape as a criterion, it is tempting to work by a motor trial-and-error. This applies particularly to impulsive children who have never 'learned to use their eyes', and to the retarded, who are content with slow and ineffective methods of work. With these types of learning-handicap, the provision of an irregular shape as a guide to correctness reinforces an unprogressive learning strategy.

Many children show unmistakable pleasure on perceiving that the piece added makes sense with the rest of the picture (the horse gets legs or the fisherman gets a fish on his rod). Achievement of recognition and discrimination is one of the sources of what I have termed effectiveness-motivation. Eleanor Gibson has drawn attention to a similar motivation; 'the need to detect what goes on in the world around us is a strong motive in its own right.... we are set to discriminate things'. Upon endless delights of recognition and discrimination depend the major appeals of the visual arts and of music. These pleasures are experienced by children from infancy. The reinforcement they afford extends their knowledge of the world and stimulates their mental development. Nevertheless, in some children this quest for a refinement and enlargement of their experience is inhibited, either by environmental deprivation or the handicaps of their own temperament. One of the

main training objectives of the Flying Start is to reinstate this powerful intelligence-forming motivation.

I shall now describe and illustrate some of the items of the Flying Start.

The Two-Piece Puzzles (Figure 1a) require merely the joining of the two halves of a boldly drawn picture. They invite the apprehensive or the retarded child to commit himself to a very easy task. It may be necessary at first to place the two halves almost touching before the student will muster the confidence to look at the materials and appreciate in them an opportunity for achievement. This readiness to participate represents a critical advance. Once made, the student is usually able to make progress beyond what might be anticipated from his apparent retardation.

The Four-Piece Puzzles (Figure 1b) consist of the same pictures cut into four equal rectangles. Familiarity with the subject of the pictures facilitates the maintenance of confidence. Whereas the fitting of four pieces demands more perseverance, once the student grasps their general arrangement he can still achieve a completion very quickly, and thus receive rapid reinforcement of his decision to attempt the task.

The Mail Boxes (Figure 2) require the student to post cards bearing letter-symbols in the boxes having the corresponding symbols on their fronts. A student at the receiving side of the box turns the card over

and checks the half-picture on its reverse with a half-picture on the floor of the box. If the two halves correspond he signifies the posting as correct, thus giving the posting student immediate knowledge of the result of his choice. If the poster relies upon trial-and-error he runs a three-to-one risk of being pronounced wrong. Guessing is thus punished by a 'loss of face'. On the other hand, the small amount of attention needed to discriminate between the letters is rewarded by success and a consequent feeling of competence.

The Merry-go-Rounds (Figure 3) were originally designed to overcome the inability of young impulsive children to await their turn in a game. The task consists in building up a circle from eight segments, the half-pictures of which are matched at their joining edges; but each of the two players has alternate segments, so that impatient attempts to build a meaningful circle using only their own pieces produce no whole pictures.

It was later found that even very hyperactive children, who refused to commit themselves to the other materials, were attracted by the easily grasped circular shape and accepted the challenge to complete it.

The Matchers (Figure 4) are similar in format to the series of cards designed by Kagan to measure delay of response, except that the subject has to go through three stages of discrimination in order to be sure of choosing the exactly matching card from the row of six. If the student

goes by only one criterion – e.g. that the pirate on the presented card is wearing a hat – he will still stand only one chance in three of making a correct match. If he stops at noting that the pirate also has a peg-leg, he stands a one-in-two chance. Certainty depends upon noting in addition which leg. Correctness of choice is shown by the tallying of bars on the backs of the cards.

The Left-Right cards (Figure 5) were designed to deal with a common perceptual problem of school learning, that of distinguishing the orientation of letters and numerals. This should not be regarded as an indication of anomaly, but rather as evidence that the child has not undergone a special process of supplementary learning. The latter is required in order to countermand the earlier learning that direction may be ignored – and in fact has to be ignored – in the recognition of objects. It is not surprising that students with poor general learning skills miss out on this process, and continue to show left-right confusions.

In the Left-Right cards the concept of directional cueing is developed by successive experiences. In free play with the cards, the student discovers that there are two of each animal, one facing to the right and the other to the left. When, in the next phase, he has to line them up to walk into a Noah's Ark, he has to place them so that they are facing towards and not away from the entrance. In the third phase he learns to connect direction and 'sideness' with his own hands and arms.

The Families cards (Figure 6) aim to provide a setting for the spontaneous structuring of experiences into categories. A group of children are given an assortment of cards containing pictures of everyday objects. The natural tendency to structure or classify objects will induce them to sort out the pictures, one child deciding to collect road vehicles, another furniture, a third animals, and so on. The goal of completing a set of six leads to innumerable acts of perceptual discrimination, and decision as to whether an object belongs to one category or another.

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Figure 1a

Figure 1b

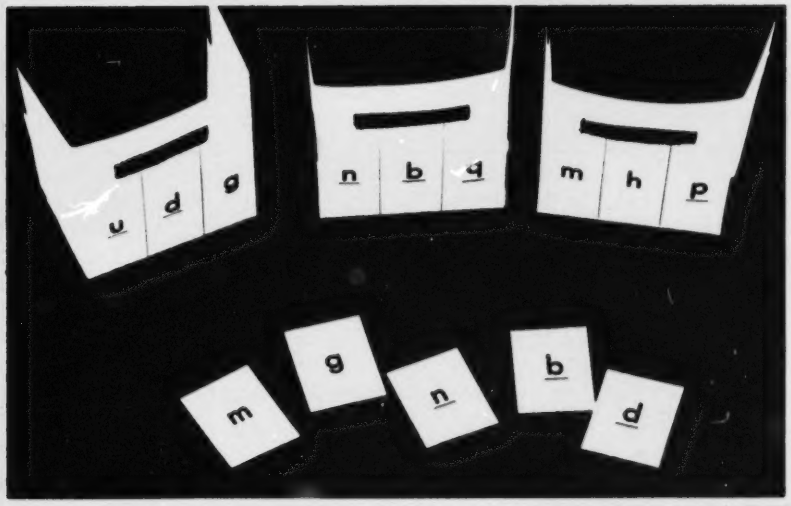

Figure 2

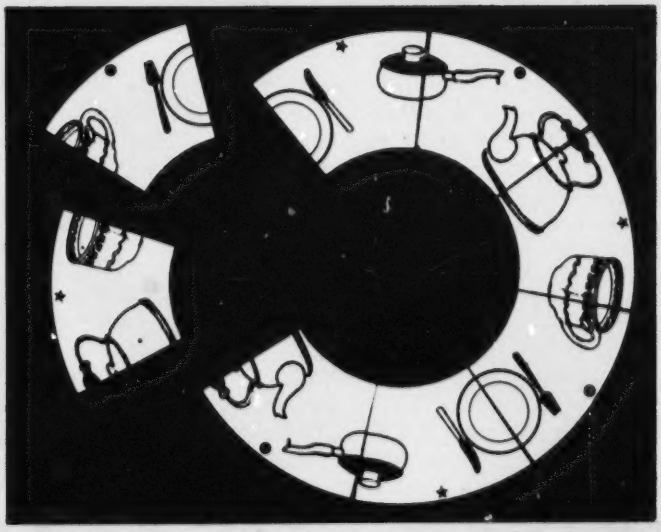

Figure 3

Figure 4

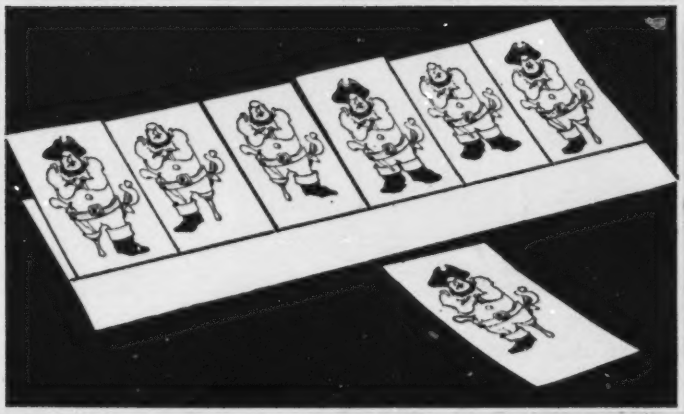

Figure 5

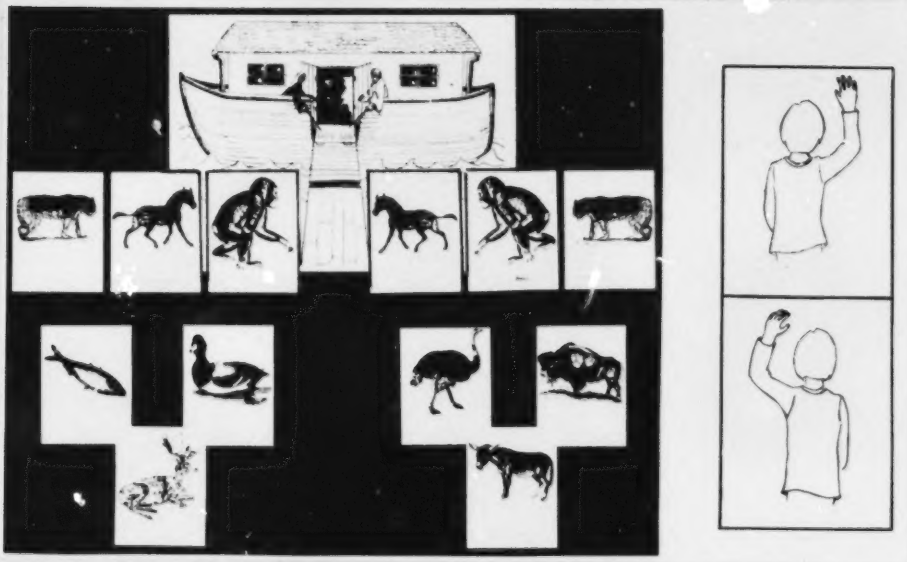

Figure 6